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ABSTRACT

This paper explores the problems of recruiting the most qualified individuals to the teaching profession. Part 1 discusses the premise that supply and demand in teacher education are subject to the market forces that influence career choices in other fields. An analysis is given of how those fluctuations operate to reduce the intellectual quality of teachers. The financial status of teachers relative to other fields is summarized. It is noted that the relative financial position of teachers is unlikely to change. Part 2 discusses factors other than salary that influence job satisfaction of teachers. It briefly suggests the complexities associated with those factors, and it suggests a direction of change that would make the public schools more pleasant workplaces. In part 3, proposals to attract more able people to teaching are described and a specific plan of action is offered. The appendix provides SAT scores for national samples and students in the six member universities of Coalition of Teacher Education Programs (COTEP): Ball State, Butler, Indiana, Indiana State, Purdue, and the University of Evansville. The data shows that the SAT scores vary considerably among the six COTEP institutions. The Indiana data generaly reflect national trends; those who elect to teach are less able than college students as a whole. (JD)

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ADVICE FOR THE TALENT SCOUT

by

J. Dudley Herron

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Advice for the Talent Scout

Introduction: When we ask how to attract more talented people to teaching, it is assumed that teachers as a whole are not very bright and that schools would be better if they were. This is conventional wisdom, and it is probably true. According to Timothy Weaver (1983), the reason is quite simple: Talent follows opportunity. As long as there is greater opportunity for financial reward, advancement, and intellectual challenge in fields other than education, the most talented individuals will elect careers in those fields. If we wish to attract talented people to teaching and keep them there, teaching must provide opportunity.

The appendix provides SAT scores for national samples and students in the six COTEP institutions. SAT scores are provided as an index of intellectual aptitude because they are commonly cited by critics and they are readily available for Indiana students. As the data show, SAT scores vary considerably among the six COTEP institutions. Still, the Indiana data generally reflect national trends; those who elect to teach are less able than college students as a whole. But there are actions that can be taken by teacher education institutions that will attract more able students.

This paper is divided into three parts. Part I summarizes Weaver's analysis of the education labor market, fluctuations in supply and demand, and how those fluctuations operate to reduce the intellectual quality of teachers. It summarizes the financial status of teachers relative to other fields and shows why the relative financial position of teachers is unlikely to change.

Part II discusses factors other than salary that influence job satisfaction of teachers. It briefly suggests the complexities associated with those factors, and it suggests the direction of change that would make the public school classroom a more pleasant place to work.

In Part III, proposals to attract more able people to teaching are described. The section ends with a specific plan of action. That plan is offered to stimulate discussion within COTEP rather than to chart the final course.

Part I: How Salaries Respond to Supply and Demand

The most comprehensive analysis of America's teacher quality problem is provided by Timothy Weaver (1977, 1978, 1979, 1981a, 1981b, 1982a, 1982b, 1983, 1984). Weaver's analysis is based on the premise that supply and demand in teacher education are subject to the same market forces that influence career choices in other fields. Simply put, talent follows opportunity. The more opportunity there is for financial reward, advancement, and intellectual stimulation, the more attractive the field. Talented people go where they have the greatest opportunity.

Weaver shows that both teacher salaries and teacher quality (as measured by SAT scores) have increased during periods of undersupply and have fallen during periods of oversupply. He shows that the teacher market follows a cycle of boom and bust just as do other markets. When the supply gets low, prices go up and production rises until the market is glutted. Then prices fall, production drops, and the cycle repeats.

Weaver clearly sees financial reward as the most potent incentive for attracting talented people to education:

> "If the public schools are to compete for the most talented individuals produced by U.S. colleges and universities, the schools must expect to pay the highest wages that such talent can command" (Weaver, 1984, p. 113).

Although many would agree with this assessment, it is not particularly helpful because it isn't going to happen. Allan Odden (1984) points out that the average teacher salary must be raised by about $10,000 to make teaching competitive with other jobs that require similar training. Since there are 2.1 million teachers in the United States, the bill would come to $20 billion, or about $500 per pupil. There is absolutely no indication that the public is ready to pay that kind of bill, even if it were assured that higher salaries would lead to major improvement in schools.

The Salary Picture. Figure 1 shows the mean earnings for several occupations during the period from 1972-1981. Figure 2 shows the same data adjusted to constant 1981 dollars. Table 1 shows the latest report on starting salaries compiled by the Purdue University Placement Service. It shows the range and the average monthly salary reported by graduates in various fields. At the bottom I have added the average starting salary for Indiana teachers. This figure was obtained by taking the latest data available from ISTA for 1984-85 salaries, assuming a 6% increase for 1985-86, and dividing by 10 to arrive at an estimate of the monthly salary for teachers beginning in 1985. The difference shown in the right-hand column is the average monthly teacher salary (based on 10 months) minus the average monthly salary for the profession in that row.

Weaver's argument that talent follows financial opportunity is not totally supported by the data. At least the data suggest that salary is not the only consideration. For example, the salary figures for graduates from the School of Technology at Purdue are among the highest reported (Table 1); but the SAT scores for students in the School of Technology at Purdue are among the lowest in the university (Appendix Table A.2). In addition, Table 1 shows that the average starting salary for teachers is not lower than the average starting salary for graduates in the humanities or in consumer and family sciences. And Figure 2 shows that teachers' salaries are not lower than those of health workers (who have comparable training) or sales workers and clerical workers (which teachers may become if they leave). Furthermore, there is far more job security for public school teachers than for workers in many other fields; and the summer recess enjoyed by teachers is still an attraction to some.

There is a substantial difference between what a person can earn teaching and what that same person can earn in a technical field. But a person with a burning interest in literature, history, political science, drama, art, physical education, or music has a great opportunity to pursue that interest throughout adult life in secondary schools. If salary is the only consideration, there are clearly more opportunities in other fields; when salary and interest are considered together, that is not always the case.

It is certainly true that those with an interest in science, mathematics, computer science, technology, or business can pursue their interest and earn more outside of education. This creates a dilemma. Teachers rightly argue that a science teacher or vocational teacher is worth no more than an English teacher or a social studies teacher. They insist on a uniform salary schedule because a non-uniform schedule implies a difference in worth that simply does not exist. But, it seems unlikely that one can convince the public to raise

salaries for all teachers to a level that is competitive with salaries in technical fields when many teachers already are starting at salaries comparable to what they would earn outside of teaching. Likewise, I see no possibility of overcoming the shortage of teachers in technical fields when individuals adequately trained to teach those subjects can easily earn 20% to 80% more outside of the classroom. [Opportunities for advancement are a separate issue. In that area, all teachers are disadvantaged. According to Feistritzer (1983), teachers who start teaching at $13,000 may expect to earn $25,000 after 15 years, whereas accountants who start at $16,000 will earn $50,000-60,000 after the same period.]

Salaries clearly matter, and we are unlikely to attract the finest minds to education until we make some progress in this area; but salaries do not explain the total picture.

Return to Supply and Demand. Before addressing other factors that affect the attractiveness of teaching as an occupation, we must return briefly to Weaver's analysis of supply and demand. When the supply of teachers is high, salaries are down; when supplies are low, salaries are higher. Further, when teacher salaries and employment opportunities fall, talented individuals move to careers where opportunities are greater, thus depressing the overall quality of the teacher labor pool.

One might reason that when demand is low, schools of education will respond by raising the admission standards and, therefore, the quality of those prepared to teach. Weaver argues convincingly that just the opposite happens.

When demand for teachers is high and salaries rise, students apply to schools of education in large numbers. Classes are filled, and there is pressure to reduce the number in the system to a manageable level. Admission standards frequently are raised. But while standards within schools of education may rise, school administrators, politicians, and local school boards are under considerable pressure to man the classrooms; and certification requirements are routinely waived to meet the crunch. However, when demand for teachers falls and applications to schools of education dry up, teacher education institutions still need students in order to maintain their existence. In order to maintain reasonable numbers of students, admission standards are lowered. Thus, there are pressures operating at both ends of the cycle to reduce standards. Even if the less able are not hired during times of plenty, they remain certified members of the teacher labor pool and may be hired during hard times.

Weaver has developed computer models based on this assumption, and the model mimics behavior when historical data are used. Although we might like to think that professional educators place the needs of society before their own need for financial security, this is not so. Consequently, any plan to raise the quality of the teacher labor pool must take into account this human response to fluctuations in teacher supply and demand. Schools of education must be able to maintain preparation programs with able students during periods of low demand in public schools, and public school employers must have access to a pool of competent teachers when demand exceeds supply. The key, according to Weaver, is diversification. The nature of that diversification is discussed in Part III.

Part II: The Quality of Life in the Public School

Low salaries are a serious problem, but they are not the only problem. Working conditions in education simply are not as good as they should be. Recent studies suggest that many teachers leave the classroom because of a sense of ineffectiveness in the classroom, lack of opportunity for professional growth, inadequate preparation time, conflict with administrators, and student midconduct (Boyer, 1983; Goodlad, 1984; Rosenholtz and Smylie, 1983). Although difficult to document, there is reason to believe that working conditions in schools are worse than they were 20 or 30 years ago. Certainly teacher satisfaction has decreased. In 1966 only 9% of teachers surveyed by NEA indicated that they "probably" or "certainly" would not become teachers again, but in 1981 the figure was 36% (Feistritzer, 1983).

A survey of Purdue graduates in science education revealed that only one-third of those who complete the teacher education program ever teach, that half of those who teach are not teaching five years later, and that those who leave the profession are among the more academically able graduates. Cresap, McCormick, and Paget (1984) report that only 70% of teacher education graduates ever teach and that 50-60% of those who teach leave during the first four years. Apparently Purdue science students are typical in this regard.

Teachers feel overworked, underpaid, and unloved. For them, as well as for their students, school is often a dull place, filled with routine. They have no control over the conditions in which they must work. Although low pay is most frequently cited as the reason for leaving teaching (or not entering the profession to begin with),other factors weigh heavy in the decision.

The past 20 years has produced social changes that have had a serious impact on schools. There is an increased emphasis on the rights of individuals (including students) and decreased emphasis on the individual's responsibility to society as a whole. Social problems such as drug abuse, sexual promiscuity, and discrimination toward minority groups, women, and the handicapped have become major concerns in our society; and public schools are seen as the solution to all of these problems. Furthermore, when schools attempt to address these problems, either voluntarily or as a result of legislative or court action, teachers are subjected to criticism and abuse from parents and organized pressure groups who disagree with the initiatives taken or fear that traditional values and private interests are threatened.

Teachers suffer from the same doubts about the effectiveness of their efforts that others have. They just don't know what to do about it. Their energies are diffused in many ways. They hear their many publics. If they raise academic standards, students with low aptitude and low self-esteem who live in troubled homes headed by unsupportive partents fail to meet those standards. If teachers attempt to foster understanding and acceptance among their disparate flock, they are castigated for failing to uphold the traditional values of Protestantism. If they attempt to help maladjusted children by keeping them in class and attempting to promote socially acceptable behavior, classes are disrupted and effective instructional time is reduced. If teachers ignore these problem children and expel them from the classroom,

the problem is only transferred to society at large. Alternatives that allow teachers to enhance their own self-esteem by doing what they do best -- teaching those who wish to learn -- while addressing the social problems of youth do not seem to exist. Such alternatives must be found.

Schools exist for the purpose of bringing about desirable changes in children. However, children are not the exclusive property of the school nor is the school the only agency charged with bringing about desirable changes in children. Even though the school shares with parents, the church, courts, and various social agencies the responsibility for bringing about desirable changes in children, these agencies operate independently and often at cross purposes. There is no structural linkage among these agencies, and there are often legal constraints to informal linkage. Tyler (1949) addressed one aspect of the problem thirty-six years ago.

> "In many modern communities there is disjunction between the school and the home, the school and the church, the school and the rest of the community with regard to the attitudes that are developed. The environments are inconsistent; values, points of view are taken for granted in the press that are denounced in the pulpit, the values emphasized in the motion pictures are in conflict with those which the school seeks to develop" (Tyler, 1949, pp. 76-77).

It is not just in the area of values that the disjunction between schools and other social institutions plays an important role, and the disjunction cited by Tyler in 1949 has not been reduced. The ability to address such complex social issues as discrimination, drug abuse, sexual promiscuity, child abuse, dishonesty, and other antisocial behavior in schools (or simply to prevent interference with education) is seriously constrained by the fact that there are no structural linkages between schools and other agencies that face the same problems in other contexts. Teachers know that they cannot solve these problems alone, and they are frustrated when asked to do so. But teachers are criticized because they fail. The situation must be changed, but how?

During the first six months of 1983 I worked in Scotland as part of a sabbatical leave. I visited schools, observed classes, and talked to science teachers. Although Scottish schools have problems, morale among teachers is decidedly better than among teachers in this country. In particular, there is far less concern about disruptive behavior; and far less energy is spent on the few students in school who have problems with social adjustment. I wondered why and sought to find out.

The primary governing body in Scotland is the District Council. In the socialist climate of Scotland, the District Council is responsible for housing, sports, education, and social welfare, as well as police protection, fire protection, and other services. All social services are linked through this governing body, and that linkage facilitates practices that have a direct effect on teacher morale.

As in the United States, disruptive students in Scottish schools often are sent to the office of the headmaster. In the case of chronic misbehavior or serious adjustment problems, a social worker from the family-services agency of the District Council is called in; and the social worker plays the leading role in trying to solve the problem. The social worker

visits the child's parents. The home environment is investigated, and the student's problem is viewed as a family problem rather than a school problem. If work is preventing the student from studying, the need for that family income is considered. If the child lacks home supervision because the parents work, alternative supervision is arranged. If there is a medical problem, the social worker sees that medical service is provided. If no way is found to alter the child's behavior so he can return to the classroom, a home-study program is arranged for the student in lieu of returning to the classroom. Although the classroom teacher will cooperate in arranging such study programs, they are supervised by the social worker rather than the classroom teacher or headmaster. If the home environment is judged to be unhealthy, children may be taken from their parents and placed in more supportive environments.

Differences between Scotland and the United States are far too great to suggest that Scottish practices could be introduced here. The point of this excursion is that there are alternatives to the conditions that paralyze many American schools and demoralize those who attempt to teach. Many of the problems that drain the energy of teachers and divert them from the tasks for which they are trained can and should be handled by other professionals. When structural connections exist between schools and other social service agencies, then professionals who are specially trained to deal with social problems and who have the freedom and resources to address them on a broader front can free teachers to do what they are trained to do, teach. If we hope to attract talented people to teaching, we must establish conditions that enable them to teach.

Part III: What Can Be Done

Numerous suggestions have been offered to attract more able students to teaching. Cresap, McCormick and Paget (1984) discuss the merits of such compensation plans as performance-based salary increases, bonuses, market-sensitive salaries, salary differentiation based on job factors, loan forgiveness and scholarships, sabbaticals, and modifications in base salaries and benefits. They discuss such career options as career ladders, short career options, part-time and joint appointments, and early retirement. They discuss such enhanced professional responsibilities as master teacher assignments, teacher projects, and longer school years as means of providing additional compensation; and they discuss nonmonetary recognition and improved working conditions as means of improving job satisfaction. All of their suggestions have merit, but most describe actions to be taken by employers. The suggestions that follow are addressed to universities such as those in COTEP.

The Fifth-Year Program. One recommendation for improving the quality of those entering teaching is to make the education of teachers a fifth-year program, admitting only those candidates who have completed an undergraduate major with an undergraduate record suitable for admission to graduate study. The frequently heard counter to the proposal is that it already is difficult to attract students to a low-paying job when only four years of preparation are required; adding a fifth year will only make things worse. However, more than half of public school teachers have a master's degree. Also, a fifth-year

program reduces the length of the teacher education pipeline from four years to one year thus reducing the time needed to respond to fluctuations in teacher supply and demand.

The fifth-year program runs counter to recent efforts to provide "early and continuous" field experiences for prospective teachers. However, numerous opportunities exist for college students to work with children in churches, summer camps, and community centers. Although such experiences do not address all of the goals of an early field experience, they do address many. Undergraduate students in "pre-ed" could seek such experiences. (They could be required for admission to teacher education, but that would defeat much of the purpose of a fifth-year program.) An undergraduate "exploratory" course that includes field experience could be offered as an elective for any student in "pre-ed". Such a course could serve a valuable recruiting and screening purpose, but I believe that it should not be required.

Expanding the Job Market for Teachers. Institutions of higher education have little control over the demand for teachers in public schools; but they can control the supply, and they can prepare graduates for teaching positions other than those in public schools.

Schools of education traditionally have seen themselves as suppliers of elementary and secondary school teachers, but educational activities take place in other places. Corporate training programs are extensive; and as the pace of technological change quickens, the need to re-educate employees for new jobs is increasing. Similarly, the military and other government agencies carry out extensive educational programs. Continuing education of adults through community colleges, extension services of universities, senior citizen centers, churches, and other organizations is extensive and likely to grow. If professional educators do in fact possess a body of knowledge concerning effective teaching, there is a potential market for graduates in education other than public schools. Serious consideration should be given to restructuring education course offerings to prepare students to teach in a variety of settings.

Expanding the market for education graduates to non-traditional fields of education would enhance the attractiveness of education as a career choice, dampen the fluctuations in the supply/demand cycle in education, and make it easier to raise and maintain admission standards in schools of education. By widening the career choices of education candidates to include positions in government and industry, as well as the public schools, there should be less flight from education when demand for public school teachers falls. Other opportunities for employment would exist, tending to temper the normal drops in salary and other incentives that result from oversupply. Furthermore, when demand for public school teachers is high, some individuals who initially leaned toward a teaching career in industry would be attracted to public school teaching, reducing the shortage and the resultant pressure to hire totally unqualified individuals to fill the classrooms.

There are, of course, important implications that accompany such a suggestion. First, there would be a necessary shift in emphasis from paper credentialing to demonstrated competence. Teaching jobs in industry would be competitive, and they would go to those trained in education only if that training clearly led to improvement in the quality of the education provided. Furthermore, the existing focus in teacher training institutions on conditions in schools and characteristics of school children must give way to a broader

consideration of the factors that affect learning at all levels and the interaction between those factors and a variety of learner characteristics. Research in education would need to be strengthened, and the context of that research would need to be broadened.

The Teacher Service. James Fox (1984) has offered the "Teacher Service" as a means of attracting bright young people to teacher education. Under Fox's plan, full college scholarships would be offered to a select group of individuals in exchange for three years of service in the state's public schools. Teacher Service candidates would major in subjects they plan to use in their lifelong careers. After graduation from college, candidates would receive intensive teacher preparation over the summer. They would then teach for three years under the guidance of an instructional leader.

The instructional leader is an important component of the Teacher Service proposal. According to Fox, "She or he would take on such duties as helping conduct the summer training, helping coordinate the school's instructional program, developing curricula, conducting inservice training, and providing general instructional leadership and continuous counseling and guidance to Teacher Service teachers" (Fox, 1984, p. 230). For these additional services, the instructional leader would receive additional compensation, thus providing a mechanism for rewarding outstanding teachers without raising many concerns associated with merit pay.

The suggested cost of the Teacher Service makes it attractive, and it is compatible with existing programs that provide forgivable loans to those who choose teaching as a profession. The actual costs of such a program would depend on the size of the scholarships provided, the salaries paid to Teacher Service teachers, salaries paid to instructional leaders, and the number of Teacher Service teachers who work under each instructional leader. Fox's analysis assumes that Teacher Service teachers would receive the beginning teacher's salary, would replace a teacher earning an average salary, and would be given a scholarship equivalent to average tuition plus room and board in a public university for four years. He further assumes that each instructional leader could counsel nine members of the Teacher Service (perhaps staggered so that three members would be in their first year of teaching, three would be in their second, and three would be in their final year). Given these assumptions, the annual salary savings (and presumably additional compensation available for the instructional leader) would be $28,842. Obviously Fox's arithmetic would not work in every circumstance. Small secondary schools, for example, could not employ nine members of the Teacher Service in a given subject (or possibly all subjects); and it would be a very brave and competent teacher who would opt to be the instructional leader for every secondary school subject. Still, the idea has merit; and it would seem to have the potential for attracting bright students to teaching, at least for a short period of time. It also has the potential for keeping exceptional teachers in the profession by making them instructional leaders.

The Teacher Service proposal has additional merits. It is possible that some members of the Teacher Service would find their experience in schools so rewarding that they would want to make teaching their permanent career. If teacher education programs were predominantly fifth-year programs, an additional

year of study could lead to certification and a permanent job in the public schools. Furthermore, in times of critical shortage, former members of the Teacher Service might be induced to return to the classroom, either on a temporary or permanent basis. Having previously taught under the guidance of an instructional leader, they would be better prepared than many who are pressed into service during times of shortage; and their record of previous employment in schools would enable employers to make intelligent decisions concerning their qualifications for filling the available positions.

Other Temporary Service Proposals. Cresap, McCormick and Paget (1984) suggest a somewhat different temporary service proposal. Rather than provide scholarships for gifted undergraduates, they suggest that teaching might become a predominantly short-term career of approximately five years and that scholarships for a year of graduate study be provided at the end of the teaching career. That year of study would be used to prepare for some other career option. Presumably students would go through existing undergraduate programs for teachers as preparation for teaching. The primary inducement would be higher entry-level salaries made possible by eliminating fringe benefits and reducing the number of teachers at higher salary levels. This proposal appears to have more drawbacks than the Teacher Service proposal.

Scholarships. Several states already provide loans or scholarships for able students who agree to teach for a fixed period of time. Typically, scholarships are offered in such areas as science, mathematics, special education, and vocational education where teacher shortages exist and salary differentials between public schools and industry are greatest.

Suggestions of Dubious Worth. In addition to these proposals, there are others for improving the intellectual quality of teachers.

Many states (including Indiana) have introduced competency exams for teachers. Weaver's (1983) analysis and computer model suggest that this will not help and could actually hurt. His argument is that when supplies are high, examination standards will rise to limit the number of teachers certified. Talented students will see the failure rate and think twice about the opportunities available in teaching. When teacher supplies are low, there will be irresistible pressure to lower the score required to pass the exam so classrooms can be filled. Weaver suggests that if competency exams are coupled with higher requirements for admission to teacher education, the number of failures on the exam would be reduced to near zero, and the negative effect outlined here would be diminished. However, Weaver is pessimistic about the possibility of this happening.

The suggestion that quality can be raised by eliminating schools of education and certification requirements has been around for years. It is usually pushed by individuals who have little direct experience with school problems. It has little merit, regardless of one's attitude toward professional education. As Weaver points out, faculty in arts and sciences are no less concerned about filling their classrooms than are faculty in education. The same market pressures that lead education faculty to lower standards when student applications drop would continue to operate regardless of where prospective teachers are housed. To support his argument, Weaver presents data that show standards were lowered in schools of engineering and elsewhere when market forces reduced the number of applicants to those schools (Weaver 1983, pp. 178-182).

A Plan for Action

Any long-term solution for America's teacher-quality problem must attack two persistent problems that make public school teaching unattractive: low salaries and poor working conditions. No single strategy will have the desired effect. The plan of action proposed here incorporates aspects of several suggestions. Although some cooperation by school corporations and the State Department of Public Instruction is required, the primary impetus for the reforms rests with institutions of higher education.

1. Schools of education should broaden their programs to prepare individuals for teaching positions in industry, government, military, and higher education. It is difficult to estimate the demand for individuals with teaching skills in the public sector, but based on results of a survey conducted by Training, Weaver (1983) estimates the number of full-time professional trainers in American corporations at about 245,000, or 12% of the number of public school teachers. There is every indication that the number will grow. The pace of technological change necessitates re-education of workers in many occupations. There is also reason to believe that colleges and universities are interested in people with the skills that good schools of education provide. Junior colleges, community colleges, and liberal arts colleges have large numbers of faculty who previously taught in public schools. Although some of the skills that make these people desirable were acquired on the job, many were not. Programs aimed specifically at preparing college teachers should provide better training for such positions.

Recent graduates of the Ph.D. program in science education at Purdue have been favorably received in academic science departments of predominantly teaching institutions. These faculty bring to the department skills in curriculum development, testing, and methods of instruction that Ph.D.s in science do not have. The departments have been strengthened by their presence, and they would favor other applicants with similar skills.

Programs in professional education should provide several options. One (or possibly two) of the options should prepare students to teach in public schools. So long as we are constrained by certification requirements, this would seem to be necessary; and this option might differ appreciably from other options because of certification requirements. A second option should focus on preparation for teaching positions in the public sector. A third option should focus on preparation to teach in colleges.

The suggestion that there should be several options in professional education does not mean that there should be several programs. In fact, most courses in each option should be the same. Professional educators have argued for years that they possess a body of knowledge about teaching and learning that has value. If this is true, and I believe that it is, then the bulk of that knowledge should be applicable to teaching and learning in any context. That body of knowledge should constitute the bulk of the professional education courses.

The reason that several options are needed is that the preparation of teachers for industry and higher education almost certainly will require the cooperation of other departments within the university. The Training survey cited by Weaver indicates that 77% of corporate training focuses on supervisory skills, 71% on new-employee orientation, and 67% on management skills. Schools of management and of technology surely will have expertise that is important to educators seeking employment in the public sector. These education

options should be planned in cooperation with faculty in other schools and departments. Similarly, colleges expect teachers to have strong subject matter competence as well as teaching skills, so options for prospective college teachers must be planned in cooperation with graduate faculty in other departments.

As additional education options are developed, degrees in education should become more attractive to able students because of the increased career opportunities. However, this will happen only if schools of education are able to produce what they promise, that is, educational expertise that has market value. The public sector is not obliged to obtain its teachers from schools of education as public schools are. They will hire them only if it is clear that graduates have the needed competencies.

Providing the competencies needed by teachers in the public sector will require professional educators to conduct research in an unfamiliar setting, and it will require that course offerings be based more firmly on research than is currently the case. However, this change has the potential for providing important benefits to public schools as well as to corporate America.

Teaching people to solve problems is the most frequently cited educational need in corporate America (Weaver, 1983, p. 150). It is also one of the most pressing needs in public schools (Herron, 1981; Herron, et al., 1982). Problem solving is an active area of research in education. To the extent that we are able to translate that research into teaching practice, we will contribute to the improvement of education at all levels.

2. Shift professional education from an undergraduate program of four years to a fifth-year program culminating in a Master of Arts in Teaching. If teacher preparation is made a fifth-year program without some of the other changes that are proposed here, it could be counterproductive. However, this seems to be the simplest way to raise standards for entrance to education; and it would provide the flexibility needed for other changes that are a part of the proposed plan of action.

Making teacher education a fifth-year program does not preclude the possibility of offering some courses at the undergraduate level. However, these courses should be exploratory or service courses for other departments. For example, there would be merit in offering an exploratory course in education that would be open to undergraduates majoring in any discipline. This course should include a field experience in an educational setting (not necessarily in the public schools) so that students would have first-hand experience that would help them decide whether teaching is a suitable career choice. In addition to the field experience, the course should provide opportunities for students to explore career options in education and to learn what skills are needed by teachers.

Service courses for students in other departments also might be offered. For example, undergraduates majoring in management or supervision may find that the content of various education courses can make important contributions to their undergraduate programs, since many of their duties involve educational functions. If graduate options are developed in cooperation with faculty in other departments, it should be possible to identify that body of knowledge within professional education that is of particular value to students majoring in other disciplines and to structure education courses accordingly.

Counseling services also should be provided for undergraduates. The counseling should direct students to elect courses that would provide the general education and communications skills normally required for certification to teach in public schools. Other undergraduate courses and extracurricular experiences that would provide a useful background for various teaching careers should be recommended. However, the counseling should not prescribe courses; and students should be free to pursue any undergraduate major.

3. Schools of education should identify a limited number of school corporations willing to cooperate in developing a Teacher Service program. The Teacher Service has enough potential for attracting able students to be tried on a limited basis. If it proves to be successful, it can be expanded.

To participate in the Teacher Service program, the school corporation must agree to provide half of the scholarship funding required for the Teacher Service members that will later be employed. The corporations must identify a teacher within the corporation to serve as the instructional leader for the Teacher Service trainees, and they must modify that teacher's assignment to allow time for supervision of the Teacher Service members. School corporations should specify the subject areas for which they will provide scholarships and accept Teacher Service teachers.

The universities offering Teacher Service scholarships will develop an intensive summer program for Teacher Service members. They will agree to pay the instructional leaders to teach in the summer program. The summer program should be coordinated by a member of the school of education faculty, and that faculty member should be available to instructional leaders during the academic year for consultation and assistance.

Needless to say, Teacher Service scholarships would be awarded on a competitive basis, and only outstanding students should receive such scholarships.

During the period of Teacher Service, members of the service would be observed closely; and those who show outstanding potential as classroom teachers and interest in teaching should be encouraged to return to the university to complete the fifth-year program leading to certification to teach in the public schools or other teaching careers.

4. Schools of education should solicit scholarship funds to support able students pursuing careers in education. Money will be needed to supplement that provided by school corporations to attract able students to the Teacher Service. Appeals should be made for state funding for this purpose, but private foundations and corporations also should be approached. Failing both, universities should allocate funds from within existing budgets to provide enough scholarships to test the idea.

Scholarship money also should be sought to support able students entering the fifth-year program. Corporations in need of professional trainers should be approached to provide scholarships for individuals interested in such a career. Alternatively, they may sponsor students from within the corporation for a year of study. Although such sponsorship would make no direct contribution toward attracting able students to public school teaching, it could have an important secondary effect by supporting the development of diversified programs.

Still a third kind of scholarship support would support older students who wish to switch from a career in industry to teaching in public schools. Scientists and other professionals who have worked in industry and retiring military personnel often are interested in teaching as a second career after retiring at an early age. Existing teaching salaries plus retirement benefits are sufficient to provide a comfortable standard of living for the years that remain before final retirement, and many individuals are attracted to the challenge of a new career in public service. However, they often are unwilling to pay the price in time and money required to meet certification requirements. By making professional education a fifth-year program, the time commitment is reduced to a reasonable level. Financial support is needed because such individuals normally have families to support while they go to school.

5. Faculties of education should work with other departments within the university to establish linkages between schools and social service agencies. None of the suggestions made thus far address the problem of unpleasant working conditions in public schools. Until that problem is addressed, the impact of financial incentives will be minimal.

In keeping with the change in focus outlined in Point 1, schools of education must enlarge their view of education to include continuing education of the adult population as well as education of children. As already mentioned, this change in orientation will necessitate closer linkages between faculties of education and other departments within the university. Similar linkages are needed to develop viable models for addressing the social problems that plague our society and prevent schools from performing their intended function. Linkages are needed with schools of religion, social work, medicine, and psychology. Collectively, specialists in these areas must develop model programs for providing social services to children and adults who need them.

These initiatives should not focus on what schools can do to address the problems. Rather, they should intentionally focus on ways to transfer responsibility away from schools as much as possible. They should establish clear lines of responsibility for the various social agencies within a community and establish mechanisms whereby problems identified in one context can be brought to the attention of another.

A pediatrician friend points out that he frequently sees signs of minor learning disability or retarded development during his examinations of young children. He is certain difficulties in school will follow, but he has no way to do much about it. In many cases, preschool educational programs or special attention during the early grades of school could prevent learning difficulties from developing. If mechanisms existed for such information to be made available to educators, and if educators had the means to work with these children and their parents before the child enters school, many children could be helped.

Not all children see pediatricians or medical practitioners of any sort; and teachers often detect signs of hearing loss, poor eyesight, physical abuse, poor nutrition, and other medical problems that can be treated. When they do, they certainly bring such problems to the attention of parents and make reasonable efforts to provide assistance. However, in many cases the effort required to solve the problem is unreasonable. Parents may not care; they may not know where to turn for needed help; they may be too proud to seek help;

they may underestimate the problem or its consequences; they may have too many problems of their own. And the teacher has problems, too. The child's problem goes unsolved, eventually compunding the problems of the teacher and the school as a whole.

I have no model other than the one seen in Scotland, where social welfare agencies have social workers who are assigned to schools to deal with such cases, to visit the home and talk to the parents, to view the child's problem in the context of the family and society as a whole, and to work out a plan of action that will provide for the needs of the child (including his or her educational needs) in the best manner possible.

Scotland has a socialist economy; it has socialized medicine and enormous social welfare programs, and 80% of the people live in Council houses. Clearly the structure of the Scottish model could not be transplanted to the United States, but its function could. The system functions to transfer complex social problems evidenced in the behavior of school children from the domain of the school to other social agencies where the problem can be treated. Organizations capable of providing most needed services exist in the U.S.: YWCA and YMCA, community centers, religious organizations, health organizations, housing authorities, and welfare agencies. But there are no structural connections among these organizations and no linkage with schools. Perhaps a Board of Social Welfare with representatives from schools, the courts, and various social agencies within a community could constitute a coordinating body to set policy and establish needed links.

My suggestion may seem to be one that makes a school problem somebody else's problem. It is not. Rather, it is a suggestion that we must let schools do what schools are designed to do, teach. We must establish other means to deal with those problems that cannot be solved in schools. If this is done, schools would have a role to play. Schools and the lay boards that govern them must enlarge their vision to include concern for all educational activities needed within the community served, just as schools of education must enlarge theirs. When social service agencies find that adults with limited resources need education about nutrition, family planning, or sound economic management, boards of education should be responsible for providing that education. Public school teachers possess expertise that can be utilized by adults as well as children, and there is no fundamental reason that they should not be used to provide it. It is up to universities to develop and test models capable of meeting social needs. Since the public school is the only institution within a community that has access at some point in time to all members of the community, it must be a part of any viable model. It must not be the only part.

The kind of change being proposed will require broad political support as well as creative leadership. Attention must be given to ways such support can be mustered. I believe that professional educators are missing an important opportunity to make needed changes in schools by opposing a popular plan to provide more choice in schools. I speak of the voucher plan to give parents greater freedom of choice in providing for their children's education. However, I agree that the plan, as usually proposed, would benefit middle-class parents while reducing public schools to even more dreary institutions for the poor and disenchanted. Because of that danger, professional educators must use the popular support of the voucher plan as leverage to obtain additional changes that could make public schools truly competitive with private ones and improve the quality of education for all.

The necessary modifications in proposed voucher plans would be two: 1) The size of the voucher must be increased (at least for less affluent parents) to give all parents viable options for the education of their children. 2) Public schools must be given the same freedom to refuse to keep students that they are unable to serve that private schools now have. Far too much energy currently is expended on a minority of students who are poorly served by public schools and who impede schools in their efforts to educate the majority. Schools must have the option of telling parents of such children, "We are unable to provide the educational services that your child needs. We know of schools that can do a better job. (Private schools that specialize in working with incorrigible children do exist, as a perusal of the advertisements in the New York Times clearly shows.) If you are unable to provide the cooperation and support that is required for us to serve your child, we must insist that you use the voucher available to you to provide for your child's education elsewhere."

Initial reaction to my suggestion has been that public schools as well as private schools would become more elitist. No one would provide suitable education for difficult students. I do not believe that is true. Private schools that cater to difficult students do exist, and a number of public schools have developed alternative programs for difficult students. This has happened when there has been little incentive to do so. Under the conditions that I suggest, there would be considerable incentive. Turning students out would have real costs. Financial support in the form of the voucher would be lost by the public school, and it would be available to any creative individual able to convince parents that he could educate their child better. That would result in incentives to develop useful educational programs for difficult students. It is now cheaper for schools, public or private, to respond as Boyer (1983) claims many teachers have already responded, to enter "into an unwritten, unspoken, corrupting contract that promises a light work load in exchange for cooperation in the classroom." When students refuse this contract, it is cheaper for schools to provide in-school detention or other policing actions than to deal with the social and educational problems of difficult students. They have little to lose. Under a robust voucher plan, there would be much to lose.

Unfortunately, a nebulous problem has been addressed by a nebulous plan for action. Let me attempt a summary.

1. Universities should utilize the broad leadership at their disposal to develop models whereby communities can provide the counseling and social services needed by children and adults within the community. Those models should provide for articulation and cooperation with schools, but the model should not operate within the framework of schools. In short, the social problems of drug abuse, sexual promiscuity, poor health and nutrition, and antisocial behavior are community problems that require the cooperation and effort of the community as a whole. The current practice of placing the major burden of those problems on schools does not adequately address the problems, and it prevents schools from delivering education of high quality and attracting the most capable individuals to the profession of teaching.

2. Local boards of education, in concert with schools of education, must broaden their perspective to include education at all levels and in all environments where education does or should take place. Adult education should be as much a concern as childhood education.

3. Professional educators should use the current public interest in a voucher plan to provide useful educational alternatives for all students and to transfer the burden of responsibility for the behavior of difficult children from the schools to parents and other social agencies, where it belongs. They should support a voucher plan, but only one that provides educational options for the poor as well as the rich.

Clearly the kind of radical change suggested here cannot be carried through by universities such as those that make up COTEP; but the initiative must come from somewhere, and universities are as likely a source as any.

APPENDIX V

STUDENT SAT DATA FOR NATIONAL SAMPLES AND COTEP INSTITUTIONS

TABLE A.1

SAT Scores for All Freshmen Admitted to COTEP Institutions and Graduates in Education

Institution		700-800	600-699	500-599	400-599	0-399	Median Score (All Freshmen)	Mean Score Education Graduates@
A	Math	0†	5%	20%	36%	39%	425*	433**
	Verbal	0	1%	11%	34%	53%	385*	392**
B	Math	2	14%	38%	32	14	530	485
	Verbal	1	11	21	50	17	500	465
C	Math	0	4	18	31	47	410	435
	Verbal	0	2	9	30	59	380	401
D	Math	2	17	36	34	11	509	478**
	Verbal	1	6	26	43	24	461	431**
E	Math	16	31	33	16	3	552	483+
	Verbal	4	15	39	33	9	478	439+
F	Math	2	17	33	32	16	506	482**
	Verbal	2	5	25	39	29	453	432**

Data from The Indiana College and University Handbook 1984-86 Edition. Published by Indiana Association of College Admission Counselors

† Entries show the percentage of students who scored in the range shown.

* Medians not available. Figures shown are estimated from distribution.

\+ Data for 1981 seniors. All other data are for 1985.

** Separate SAT-M and SAT-V not available. Estimated from total SAT and distribution of scores for freshmen at this institution

@ Data for education graduates supplied by institutions.

Data for the six schools are identified by letter rather than name to preclude the need to rationalize scores that seem too low or too high. It is the comparison of teachers to other occupational groups that concerns us rather than the relative rank of institutions.

TABLE A.2

Comparison of SAT Scores for Selected Majors
Purdue University (1981 data)

	SAT-M	SAT-V
Agriculture	482	421
Consumer and Family Services	453	421
Humanities, Social Science and Education	468	442
Science	576	488
Technology	488	409
All Education Majors at Purdue	467	426

TABLE A.3

SATM and SATV Scores of College Seniors by Field of Study, 1976

Field	SATV	SATM	Total
Ag/HomeEc	472	516	988
Business	476	530	1,006
Office/Clerical	340	409	749
Computer	461	583	1,044
Education	**445**	**476**	**921**
Engineering	524	625	1,149
Vocational/Tech	432	502	934
Humanities/Arts	534	528	1,062
Health Related	498	513	1,011
Public Service	464	498	962
Physical Sci/Math	549	631	1,080
Social Science	509	532	1,041
Biology	540	573	1,113
Professional	518	551	1,069
Total	**491**	**527**	**1,018**

Adapted from Table 2.6 Weaver (1983) p. 168
Source: National Longitudinal Study, May 1, 1978

TABLE A.4

A Comparison of 1972 and 1976 SATV and SATM Scores for College-Bound Seniors and College Graduates by Selected Fields of Study

College Major	1972 College-Bound, Scores (mean)		1976 College Graduates, NLS, Scores (mean)	
	SATV	SATM	SATV	SATM
Business	409	463	476	529
Education	418	449	445	475
Engineering	460	548	524	624
Social science	476	490	509	532
Physical science	505	570	548[a]	631[a]
Agriculture	427	471	472[b]	515[b]
Health	419	444	498	513
Vocational	400	450	432	501
Biology	440	451	540	573
Mathematics	481	595	548[a]	631[a]

[a]Mathematics and physics combined.
[b]Combines agriculture and home economics.

Taken from Weaver (1983, p. 176)

TABLE A.5

SAT Mathematics and SAT Verbal Means for College-Bound Seniors Selecting Education and Arts/Sciences Areas as First Choice College Majors, 1972-79

	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
SATV								
Business	409	406	406	413	402	401	400	399
Art	440	432	435	438	412	408	404	402
Biological Science	493	488	481	483	475	475	472	469
English	500	496	488	489	504	504	505	507
Foreign Language	491	483	481	485	481	476	475	472
Mathematics	481	479	463	472	464	464	459	455
Music	465	462	448	452	445	439	437	436
Philosophy	479	476	469	478	467	466	465	460
Physical Science	505	503	501	506	500	499	498	495
Social Science	476	463	465	464	456	457	455	456
Engineering	480	465	450	452	448	448	445	444
Education	418	417	405	405	400	396	392	389
National	445	444	434	431	429	429	427	424
SATM								
Business	463	457	461	471	453	447	447	446
Art	451	441	445	443	425	422	421	419
Biological Science	533	528	525	530	515	511	507	506
English	481	473	465	469	478	476	478	481
Foreign Language	498	494	486	487	483	477	476	475
Mathematics	595	584	580	594	588	585	580	577
Music	487	479	464	468	463	456	456	455
Philosophy	500	489	484	495	487	481	482	477
Physical Science	570	568	565	572	572	566	561	560
Social Science	490	477	476	475	474	472	472	473
Engineering	548	554	541	550	546	540	536	535
Education	449	448	434	431	426	422	420	418
National	481	480	472	472	470	468	467	466

Source: College Entrance Examination Board, National College-Bound Seniors, Sub-Career Fields, Intended Areas of Study. First Choice. 1972-79.

Taken from Weaver (1983, p.163)

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